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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/740,209	12/18/2000	Jaan Noolandi	D/A0489	4337
7	590 04/07/2005		EXAM	INER
John E. Beck			DAWSON, GLENN K	
Xerox Corpora Xerox Square -			ART UNIT	PAPER NUMBER
	chester, NY 14644		3731	
			DATE MAILED: 04/07/2009	5

Please find below and/or attached an Office communication concerning this application or proceeding.

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	Application No.	Applicant(s)					
	09/740,209	NOOLANDI ET AL.					
Office Action Summary	Examiner	Art Unit					
	Glenn K Dawson	3731					
The MAILING DATE of this communication a Period for Reply	ppears on the cover sheet w	ith the correspondence address					
A SHORTENED STATUTORY PERIOD FOR REF THE MAILING DATE OF THIS COMMUNICATION  - Extensions of time may be available under the provisions of 37 CFR after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a r  - If NO period for reply is specified above, the maximum statutory perion  - Failure to reply within the set or extended period for reply will, by stat Any reply received by the Office later than three months after the ma earned patent term adjustment. See 37 CFR 1.704(b).	N. 1.136(a). In no event, however, may a reply within the statutory minimum of third will apply and will expire SIX (6) MON tute, cause the application to become AE	eply be timely filed  by (30) days will be considered timely.  ITHS from the mailing date of this communications  BANDONED (35 U.S.C. § 133).	cation.				
Status							
1) Responsive to communication(s) filed on 27	December 2004						
	his action is non-final.						
3) Since this application is in condition for allow	<i>,</i> —						
Disposition of Claims							
4) ⊠ Claim(s) 1-7,9-17,19 and 21-24 is/are pendi 4a) Of the above claim(s) is/are withd 5) □ Claim(s) is/are allowed. 6) ⊠ Claim(s) 1-7,9-17,19 and 21-24 is/are reject 7) □ Claim(s) is/are objected to. 8) □ Claim(s) are subject to restriction and	rawn from consideration.						
Application Papers							
9) The specification is objected to by the Exami	ner.						
10) The drawing(s) filed on is/are: a) a	ccepted or b) objected to	by the Examiner.					
Applicant may not request that any objection to the	ne drawing(s) be held in abeyar	nce. See 37 CFR 1.85(a).					
Replacement drawing sheet(s) including the correct 11) The oath or declaration is objected to by the							
Priority under 35 U.S.C. § 119							
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of:  1. Certified copies of the priority docume 2. Certified copies of the priority docume 3. Copies of the certified copies of the priority docume application from the International Bure * See the attached detailed Office action for a life.	ents have been received. ents have been received in A riority documents have been eau (PCT Rule 17.2(a)).	pplication No received in this National Stage	Đ				
Attachment(s)	, <b>,</b> , , , , ,	(070 447)					
I) ⊠ Notice of References Cited (PTO-892)  ☑ Notice of Draftsperson's Patent Drawing Review (PTO-948)		Summary (PTO-413) s)/Mail Date					
Information Disclosure Statement(s) (PTO-1449 or PTO/SB/C Paper No(s)/Mail Date 12-20-2004.		nformal Patent Application (PTO-152)					

## Claim Rejections - 35 USC § 102

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
- (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.
- (f) he did not himself invent the subject matter sought to be patented.

Claims 1-7,9-17,19 and 21-24 are rejected under 35 U.S.C. 102(f) because the applicant did not invent the claimed subject matter.

U.S. Patent No. 6622720 having a different inventive entity discloses the exact same invention as that claimed in the present application. It is therefore unclear exactly who invented the claimed subject matter recited in the pending claims of the present application.

# Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

- 1. Determining the scope and contents of the prior art.
- 2. Ascertaining the differences between the prior art and the claims at issue.
- 3. Resolving the level of ordinary skill in the pertinent art.
- 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boucher, et al.

Boucher discloses a driver generating acoustic energy to form capillary waves for emitting droplets of pharmaceutical product. However there is no actual disclosure of the droplet being inhaled. Since the entire disclosure is drawn to the atomization of inhalants, it would have been obvious to have manufactured the droplets and then used them by providing them to a patent in need of inhalation therapy

Claims 1,2,5,6 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elrod-4748461 in view of either Elrod, et al.-4751530 or Oeftering-5722479.

Elrod discloses a system having a driver generating acoustic energy which forms capillary waves on the surface of a pool of ink. Known means are employed for focusing the energy to cause the capillary waves. However, the acoustic lens is not disclosed. Both Elrod and Oeftering disclose that it was known in the art of ink printing to focus the acoustic energy of a droplet emitter with an acoustic lens. It would have been obvious to have used an acoustic lens to focus the energy of Elrod, as Elrod stated that any focusing means could be used and as evidenced above, acoustic lenses were known for this exact purpose.

Claims 3,11,14,15,19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elrod-4748461 in view of either Elrod, et al.-4751530 or Oeftering-5722479 as applied to the claims above, and further in view of Roy-6302524.

Elrod as modified above makes obvious the invention as claimed with the exception of the type of lens, the delivery system of a pharmaceutical product and the distance from the lens to the reservoir. Roy discloses that fresnel acoustic lenses were known. To have used a fresnel acoustic lens for the acoustic lens disclosed by Elrod or Oeftering would have been obvious as these types of lenses have found use in droplet emitters. Roy also discloses that the pressure of the fluid being formed into droplets needs to be regulated for proper droplet formation. It would have been obvious to have provided the system of Elrod with a delivery system which kept the fluid under pressure

and in the proper location, as taught by Roy, as this allows for proper droplet formation. It was notoriously well known in the art to place the lens at a distance of the focus of the lens to achieve proper droplet formation. Therefore, to have used a lens having the claimed focal length would have been an obvious design choice as the distance needs to be very small and the exact distance could be tailored to the specific lens. Roy also teaches that the principles of AIP are suitable for the ejection of biological compounds and therefore, it would have been obvious to have used the device to form droplets of a pharmaceutical product as it was known to use droplet emitters to form inhalable droplets.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Elrod-4748461 in view of either Elrod, et al.-4751530 or Oeftering-5722479 as applied to the claims above, and further in view of Roy-6302524 as applied to the claims above, and further in view of Hakkinen-5063922.

Elrod as modified above makes obvious the invention as claimed with the exception of the detection circuit. Hakkinen discloses that it was known to provide ultrasonic atomizers with an inhalation detection circuit. It would have been obvious to have provided Elrod's device with an inhalation detection circuit, as taught by Hakkinen, as this allows for the power of the droplet emitter to only be delivered when the medication is ready to be inhaled thus minimizing possible losses of product.

Claims 4 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elrod-4748461 in view of either Elrod, et al.-4751530 or Oeftering-5722479 as applied to the claims above, and further in view of Hirahara, et al.-6045208.

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Elrod makes obvious the invention as claimed with the exception of the lens being plastic. Hirahara discloses that plastic fresnel lenses were known. It would have been obvious to have manufactured the acoustic lenses of the above combination out of plastic, as such materials are easily molded or formed into the proper shape.

### **Double Patenting**

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 11-17 and 19 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-21 of U.S. Patent No. 6622720. Although the conflicting claims are not identical, they are not patentably distinct from each other because the application claims are merely broader in scope than those dependent claims, such as claims 8-10 of the patent.

#### Response to Arguments

Applicant's arguments with respect to the rejected claims have been considered but are most in view of the new ground(s) of rejection.

#### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Glenn K Dawson whose telephone number is 703-308-4304. The examiner can normally be reached on M-Th 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anhtuan T. Nguyen can be reached on 703-308-2154. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Glenn K Dawson Primary Examiner Art Unit 3731

Gkd 16 March 2005